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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/923,272	08/03/2001	E. Wendell Diller	D55.2-10027	2496

490 7590 04/15/2005

VIDAS, ARRETT & STEINKRAUS, P.A.
6109 BLUE CIRCLE DRIVE
SUITE 2000
MINNETONKA, MN 55343-9185

EXAMINER

CLEMENT, MICHELLE R

ART UNIT PAPER NUMBER

3641

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/923,272

Applicant(s)

DILLER, E. WENDELL

Examiner

Michelle (Shelley) Clement

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,8,9,12,14,15 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8,9,12,14,15 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection as necessitated by applicant's amendments.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 9, 12, 14, 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renner (US Patent # 5,844,162) and *The Illustrated Book of Guns* (hereafter GUNS). Renner discloses muzzle venting for a muzzleloading rifle comprising and elongate barrel having a breach end and a muzzle end and a plurality of vents disposed through the barrel. Renner further discloses that the number and size of the vents will vary depending upon calibers of the barrel, arrived at as a result of tests. The particular vents have a diameter of 0.125 inches but different numbers or shapes of vents may be used depending on the desired result (column 4, lines 55-60) Although Renner does not explicitly disclose the vents being of the same size, irregularly spaced or initiating beyond twelve inches from the breach end of the barrel, it would have been obvious to one of ordinary skill in the art at the time the invention was made have the vents the same size and space them irregularly and initiating beyond twelve inches from the breach end, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215

Art Unit: 3641

(CCPA 1980). Although Renner does not expressly disclose the barrel having a length of at least three feet, GUNS does. GUNS teaches several well known muzzleloading firearms having a barrel length over 3 feet. GUNS and Renner are analogous art because they are from the same field of endeavor: muzzleloaders. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the barrel length as taught by GUNS with the venting as taught by Renner. The suggestion/motivation for doing so would have been to decrease recoil and disperse smoke and sound as taught by Renner at column 2, lines 10-25.

4. Claims 3, 5, 6, and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renner and GUNS as applied to claim 1 above, and further in view of A'Costa (US Patent # 4,546,564). Although neither Renner nor GUNS expressly disclose the barrel formed of barrel sections, A'Costa does. A'Costa teaches a rifled barrel constructed in two sections to provide easy replacement of a section that might wear out sooner than the other section. The barrel is formed of sections (column 2, lines 60-70), which are fixedly secured to each other. A'Costa, Renner and GUNS are analogous art because they are from the same field of endeavor: rifled gun barrels. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sectional barrel as taught by A'Costa with the barrel and vents as taught by GUNS and Renner. The suggestion/motivation for doing so would have been to obtain a rifle in which one section of the barrel that wore out sooner could be replaced.

Although Renner does not explicitly disclose the barrel length being between three and twelve feet, approximately seven feet, it is well known in the art that the longer the barrel the greater the velocity and accuracy, but any increase in barrel length after a point only gives a small increase in muzzle velocity and barrel length is generally governed by balancing these factors. Therefore,

Art Unit: 3641

it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the barrel length seven feet, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelley Clement whose telephone number is 571.272.6884. The examiner can normally be reached on Monday thru Thursday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571.272.6873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3641

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mrc

H. Clement